

FIG. 1

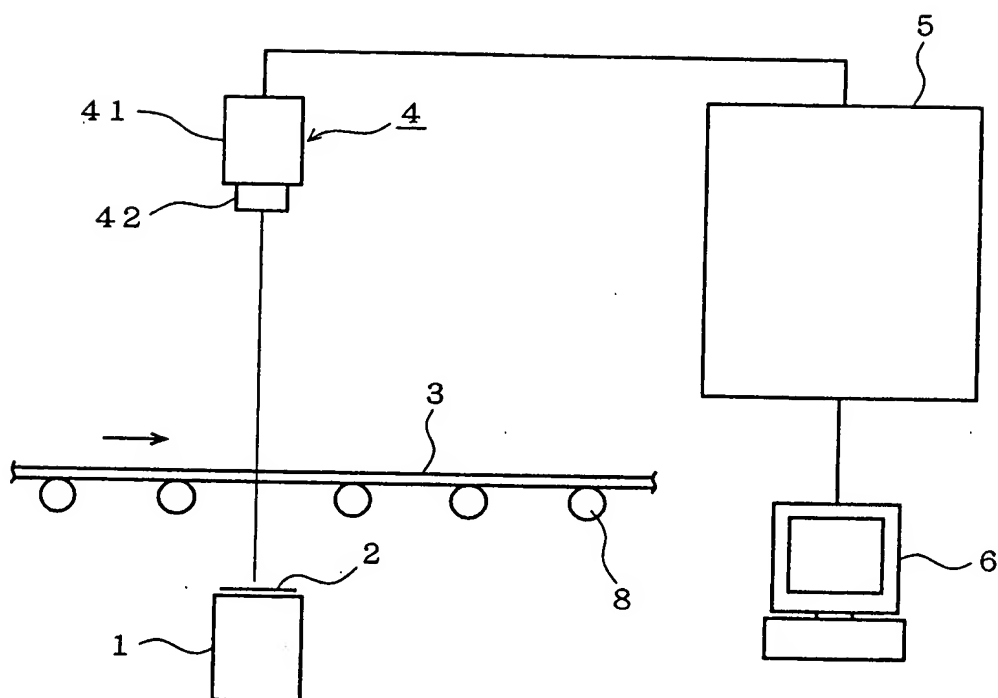
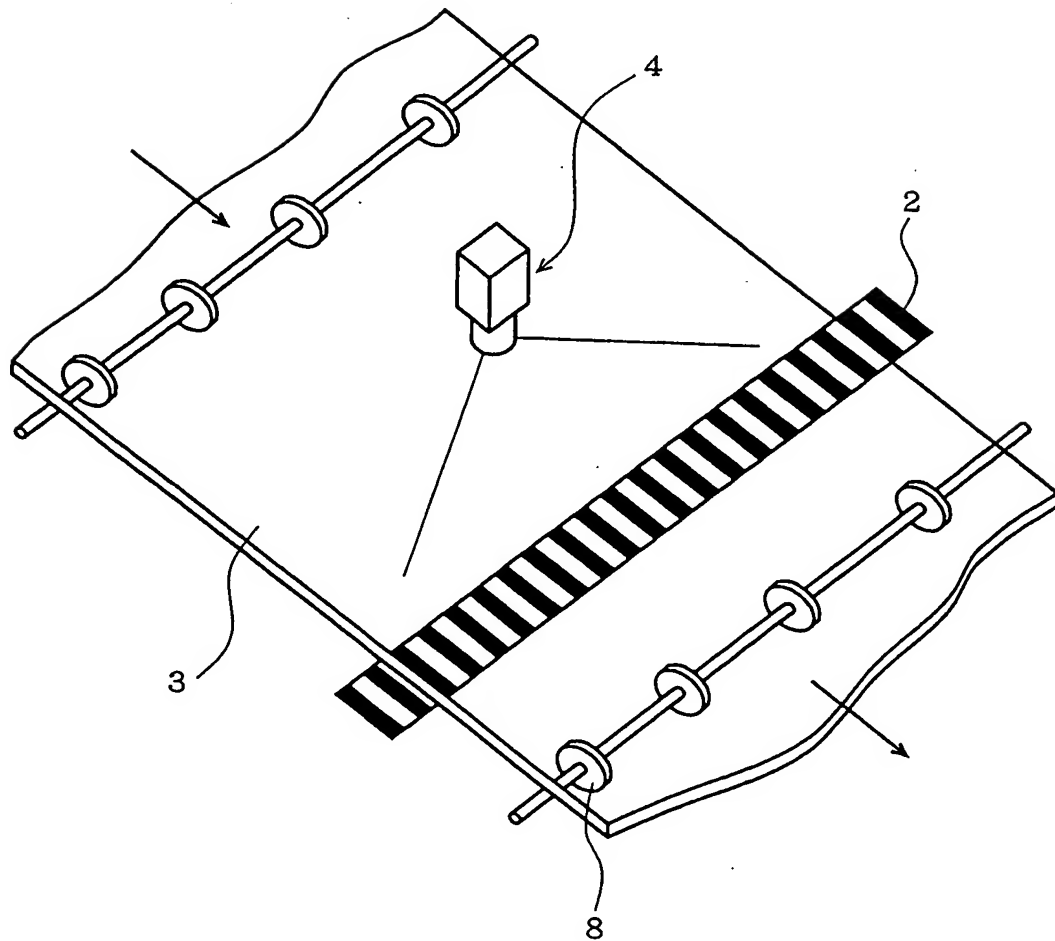
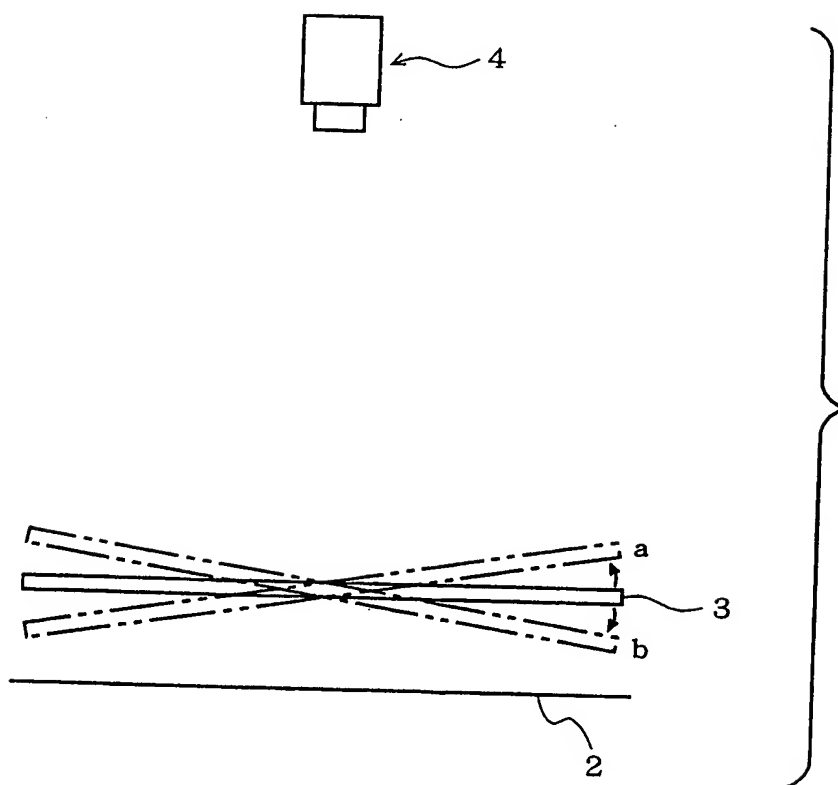


FIG. 2



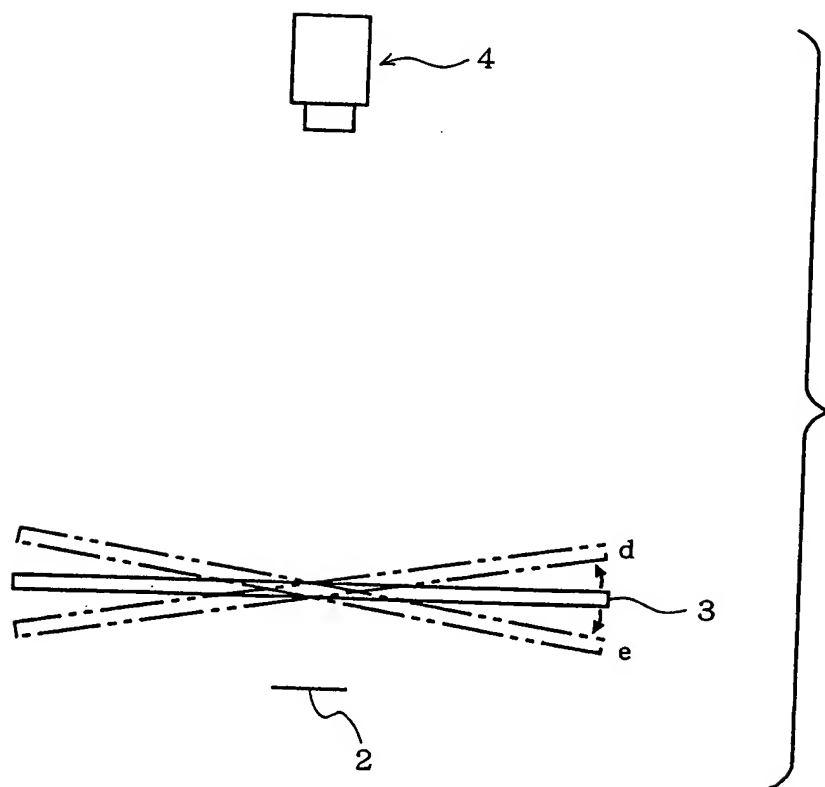
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FIG. 3



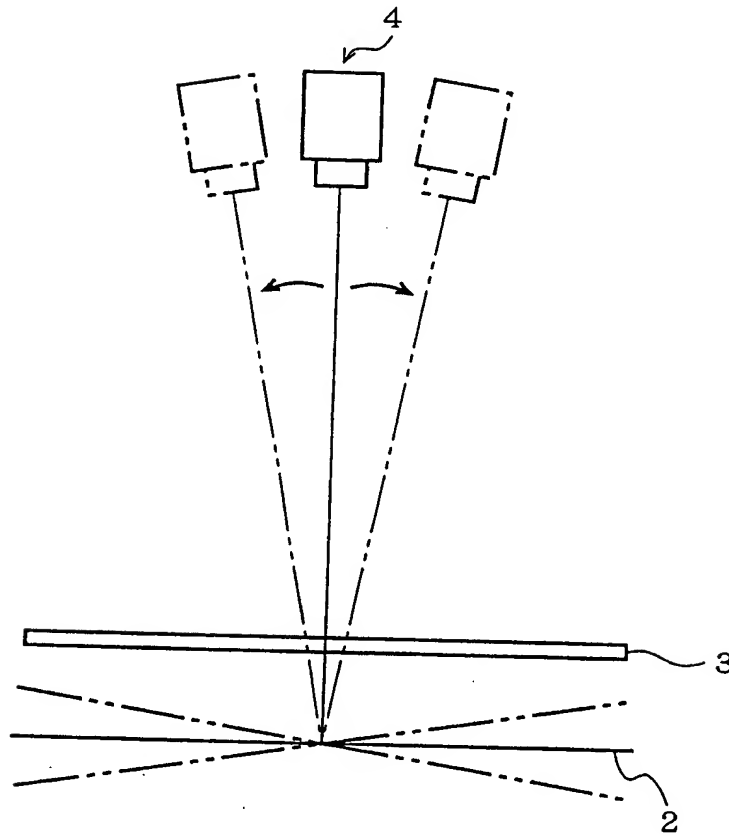
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FIG. 4



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FIG. 5



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FIG. 6

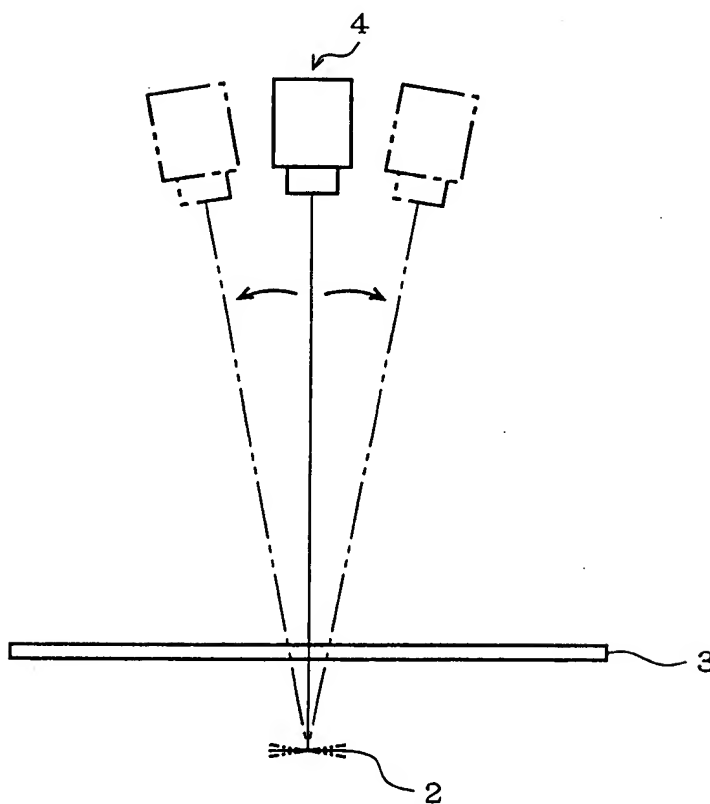


FIG. 7A

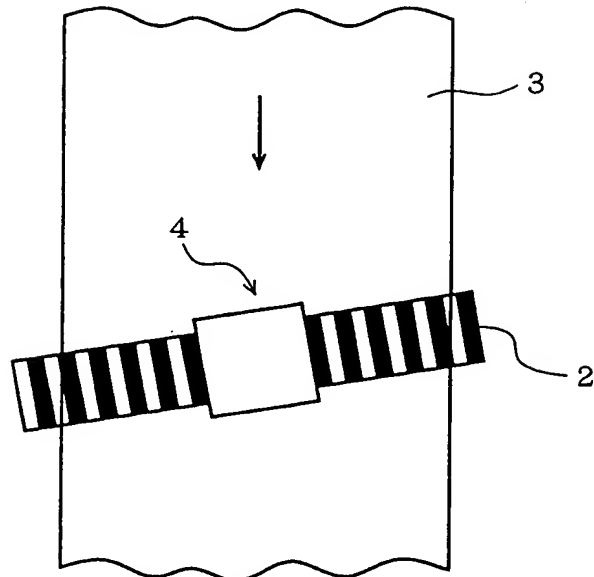
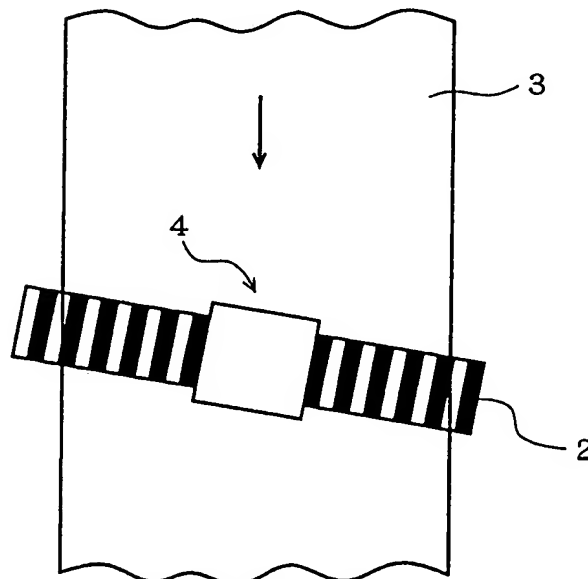


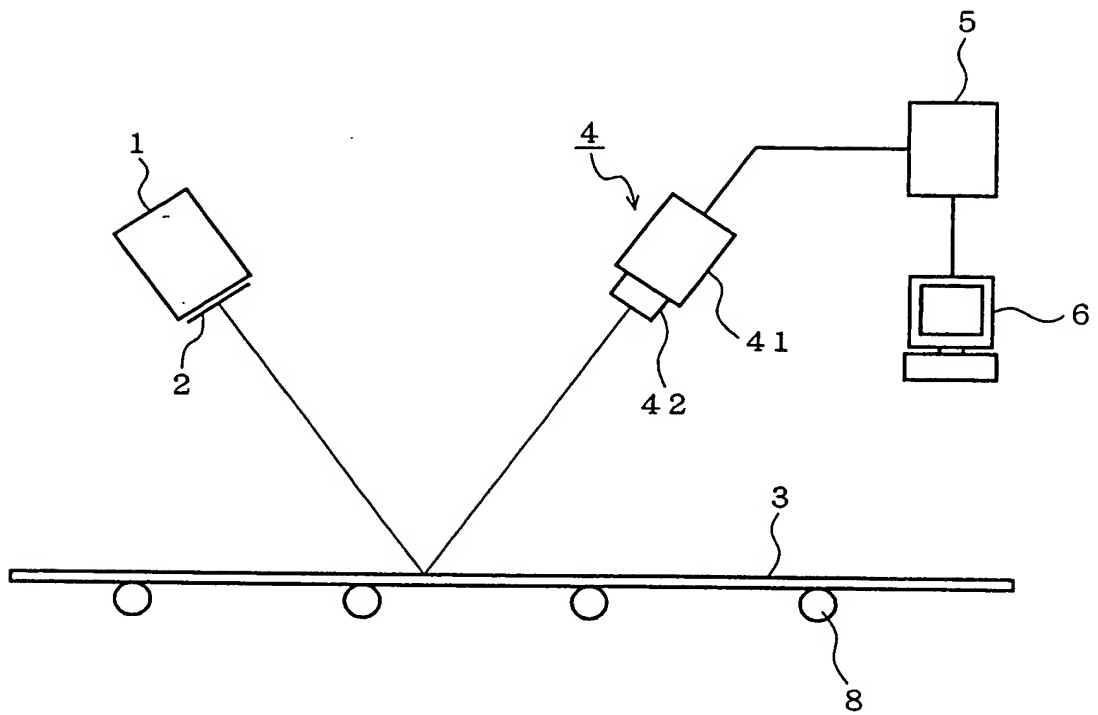
FIG. 7B



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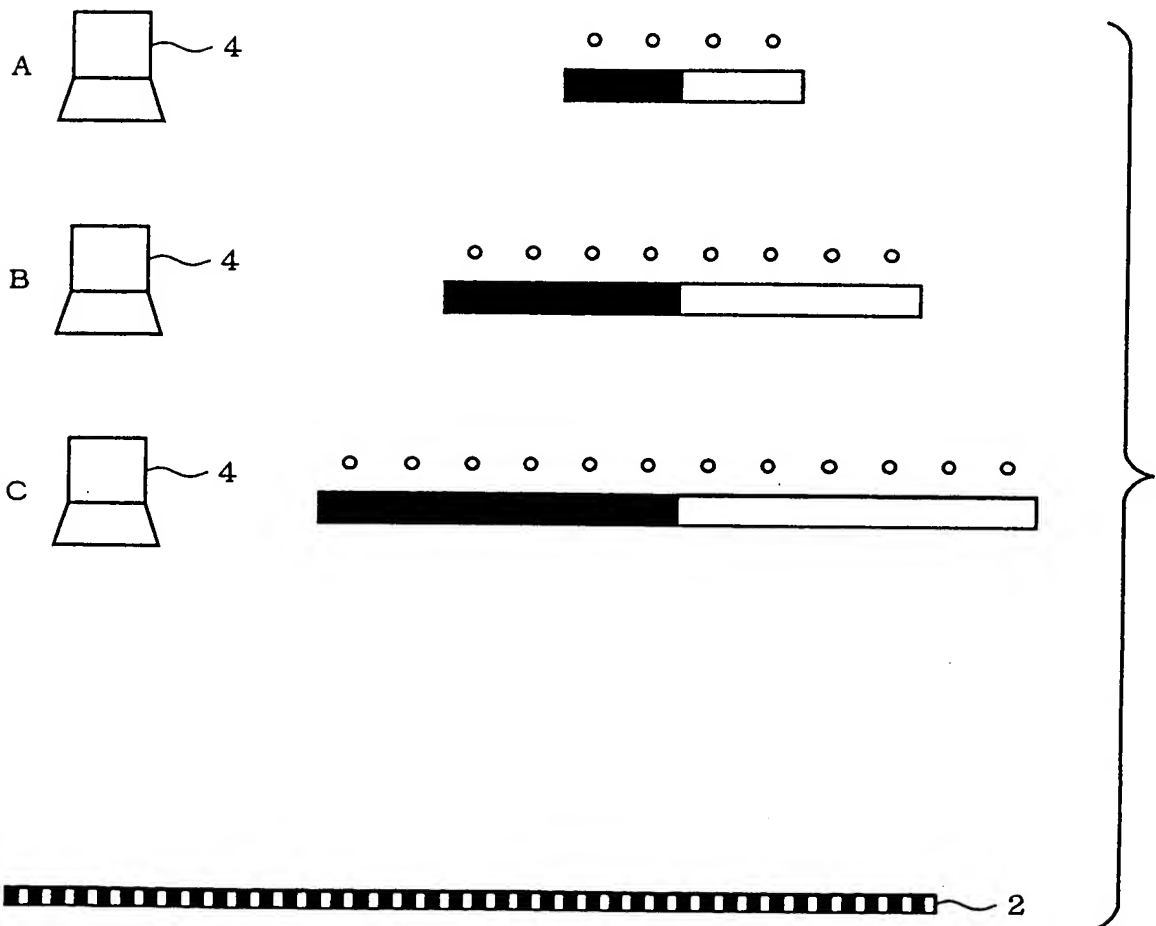
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FIG. 8

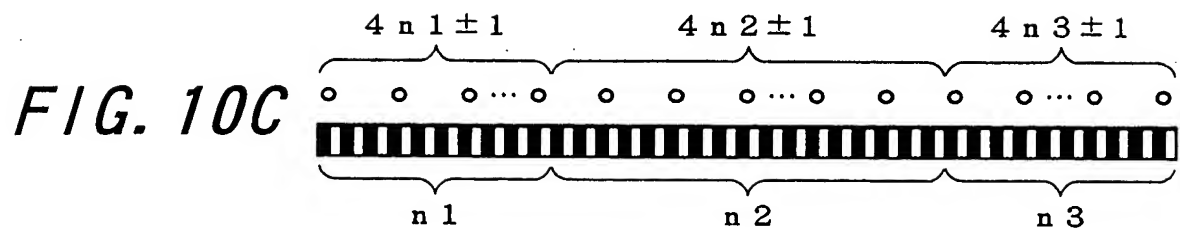
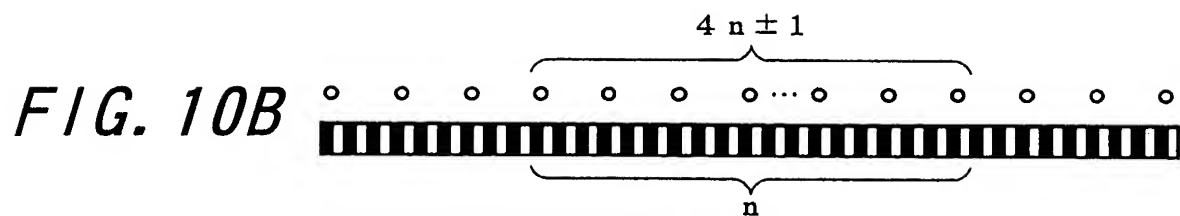
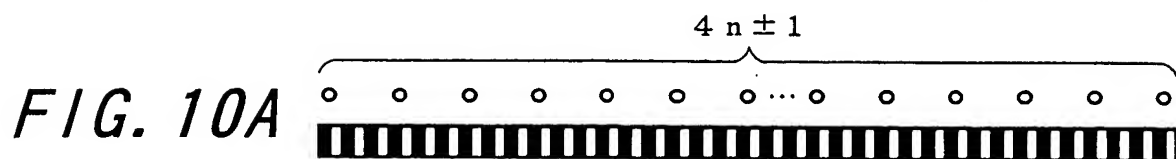


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FIG. 9



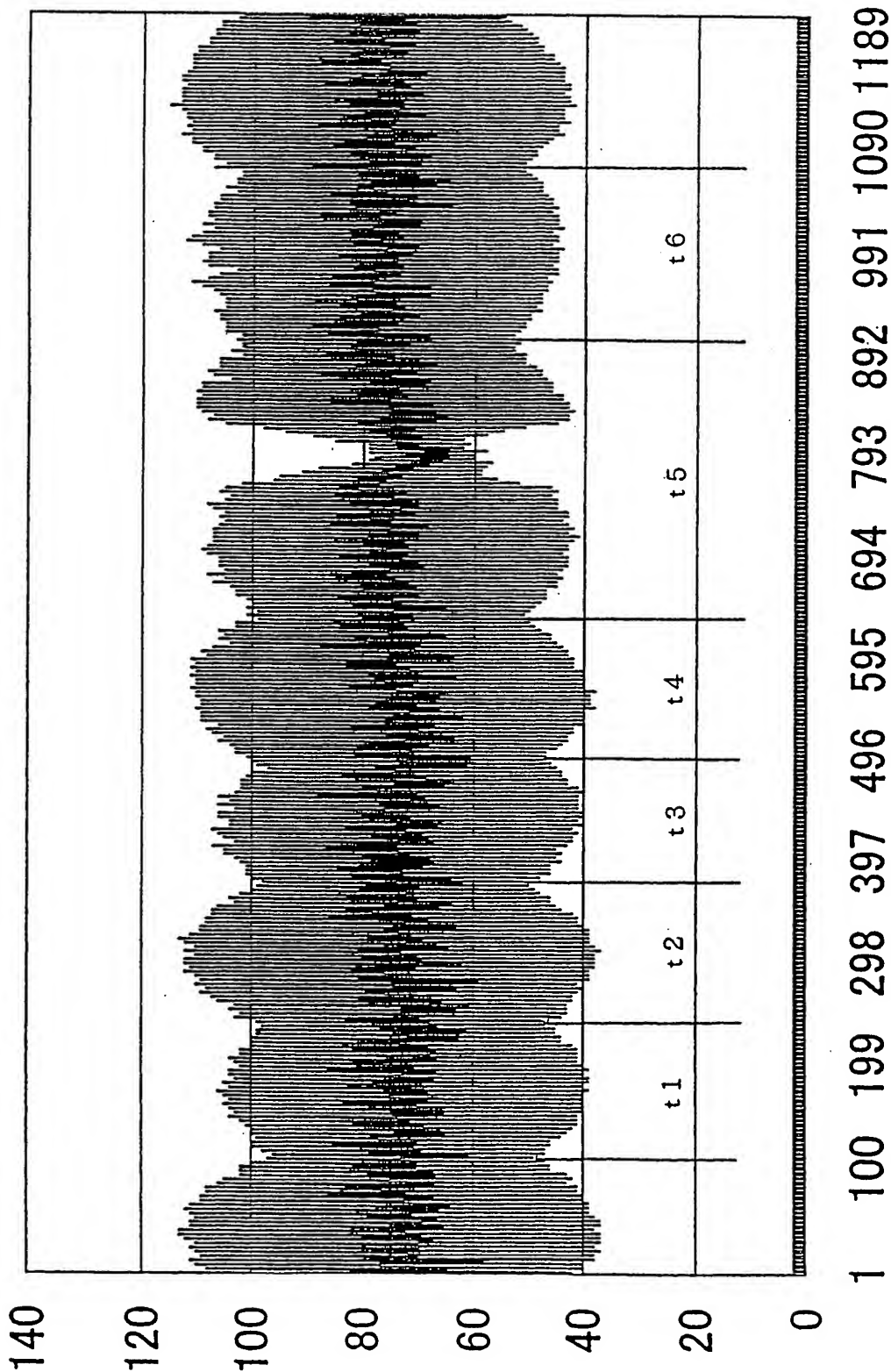
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FIG. 11



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FIG. 12

IN CASE OF $X=4$

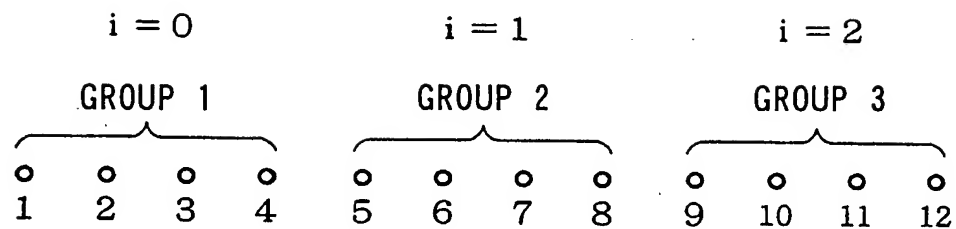


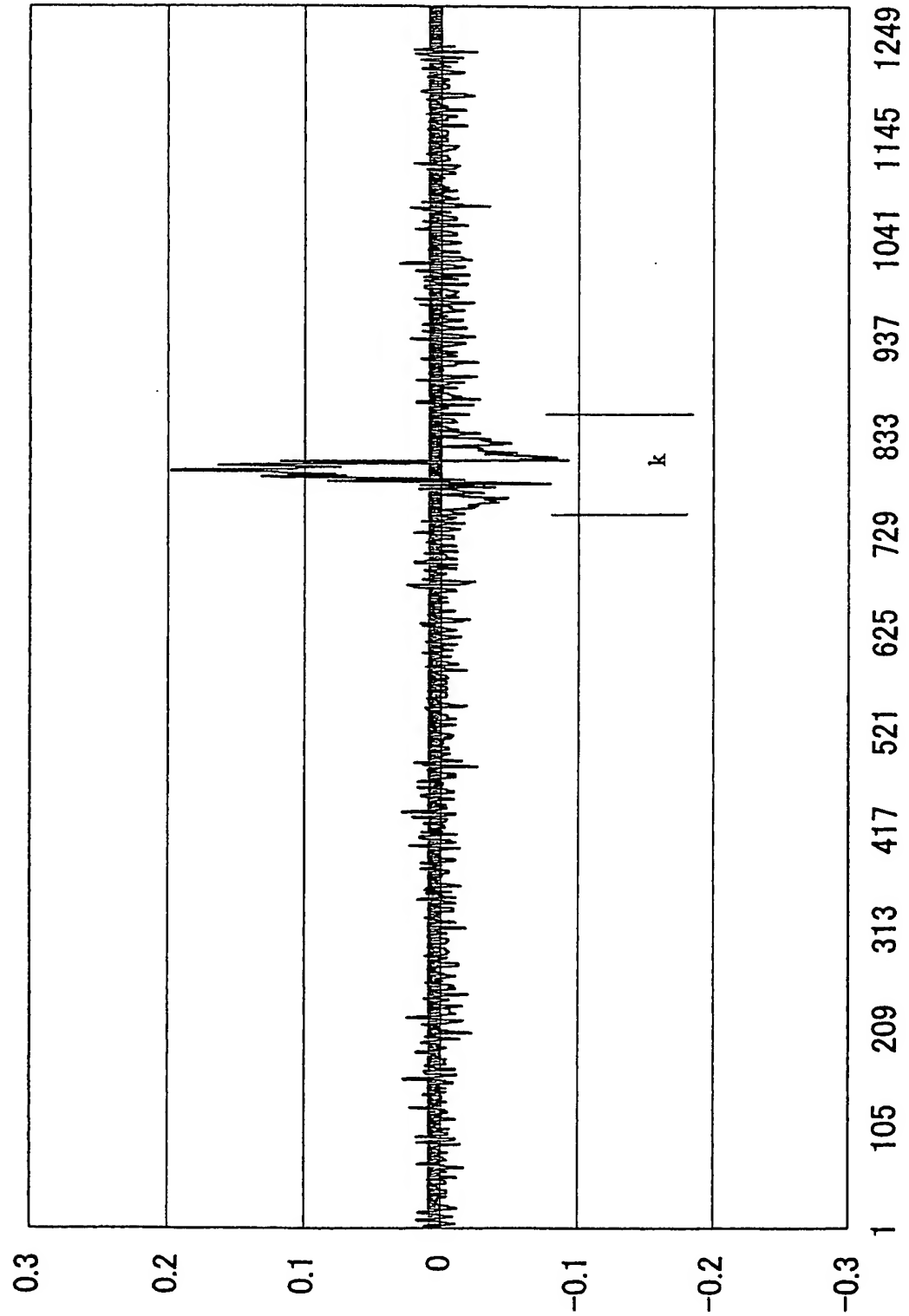
FIG. 13

	C_{4i+1}	C_{4i+2}	C_{4i+3}	C_{4i+4}
FOR WAVE A	+	+	-	-
FOR WAVE B	+	-	-	+
FOR WAVE A	-	+	+	-
FOR WAVE B	+	+	-	-

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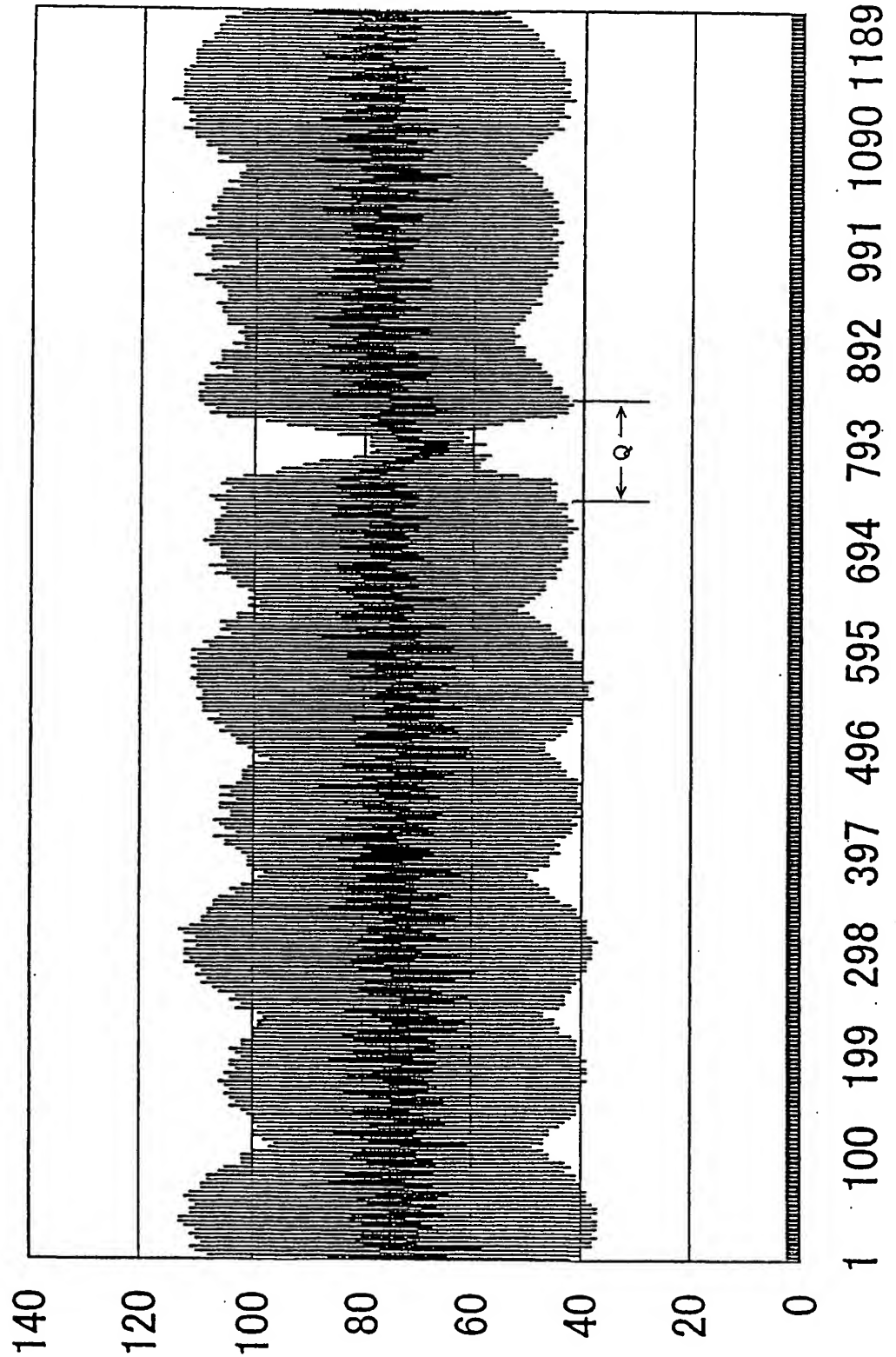
FIG. 14



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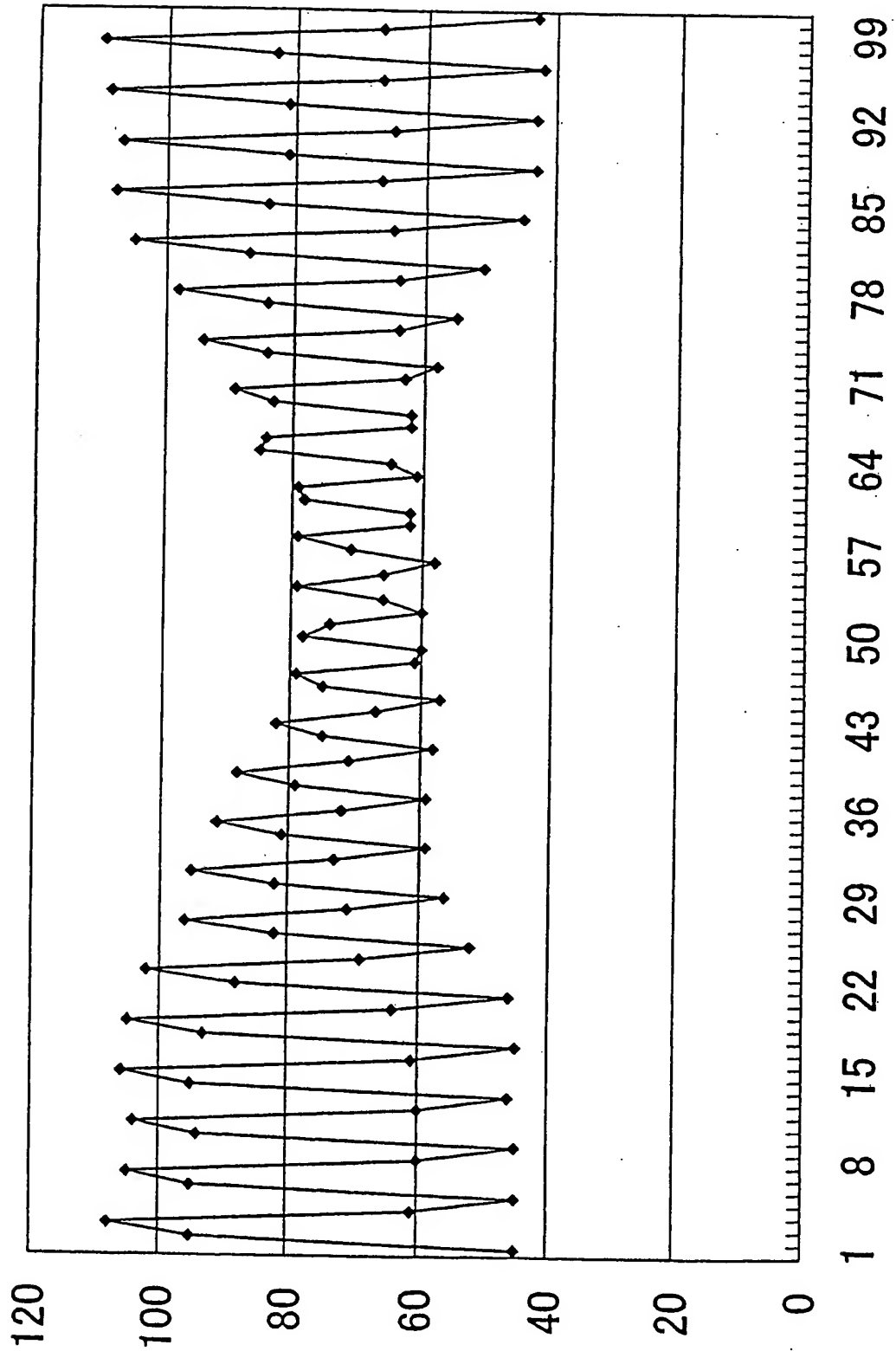
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FIG. 15



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FIG. 16



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FIG. 17

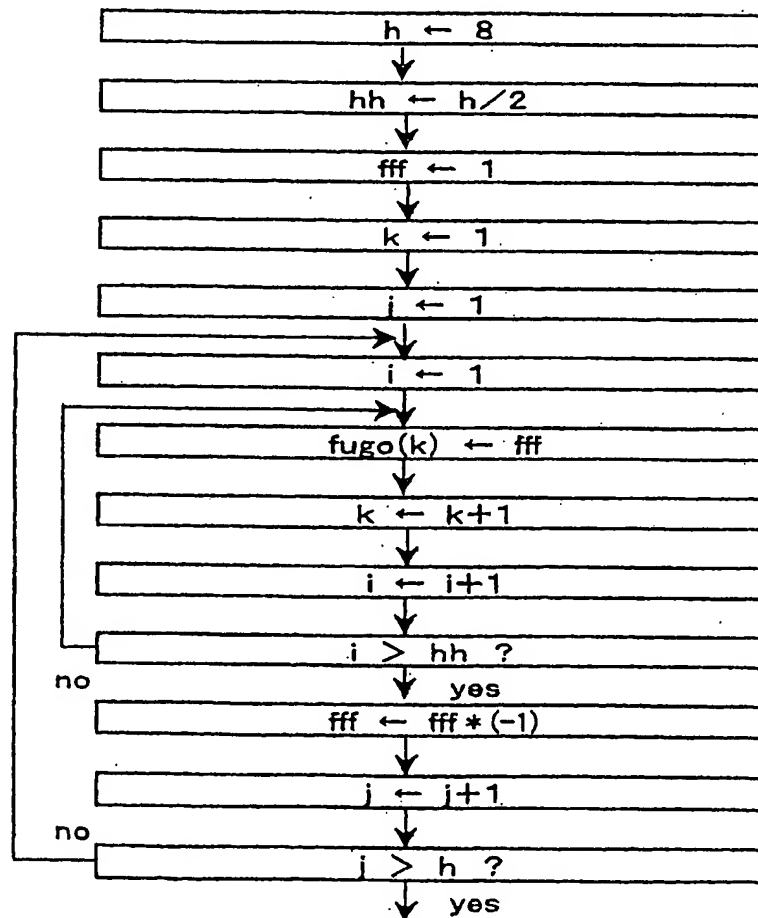
FLOWCHART OF SOFTWARE PROCESSING

h : NUMBER OF PIXELS PER PITCH
 fugo : SIGN FOR CALCULATING ORIGINAL IMAGE DATA
 shift : AMOUNT OF SHIFT FOR CALCULATION FOR GENERATING SINE
 WAVES SHIFTED AT 90°
 data : ORIGINAL IMAGE DATA
 aaa : DATA ON SINE WAVES WITH PHASE A
 bbb : DATA ON SINE WAVES WITH PHASE B
 ccc : PHASE ANGLE ON LISSAJOUS FIGURE
 ddd : ANGULAR SPEED
 pixel : NUMBER OF PIXELS FOR PROCESSING

STEP 1

GENERATE SIGN

GENERATE ++++-----++++-----++++-----



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FIG. 18

STEP 2 GENERATE SINE WAVES WITH PHASE A AND PHASE B

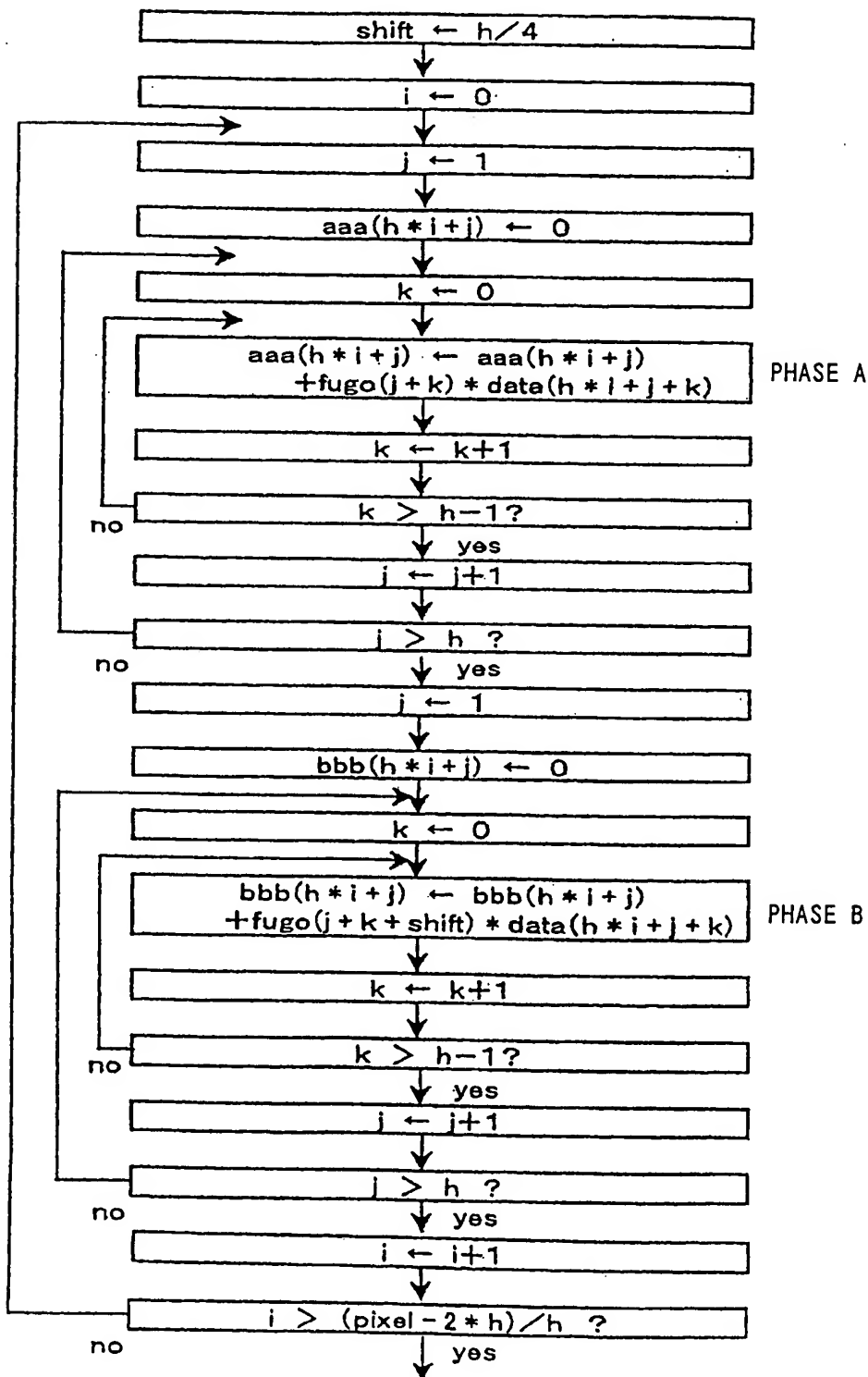
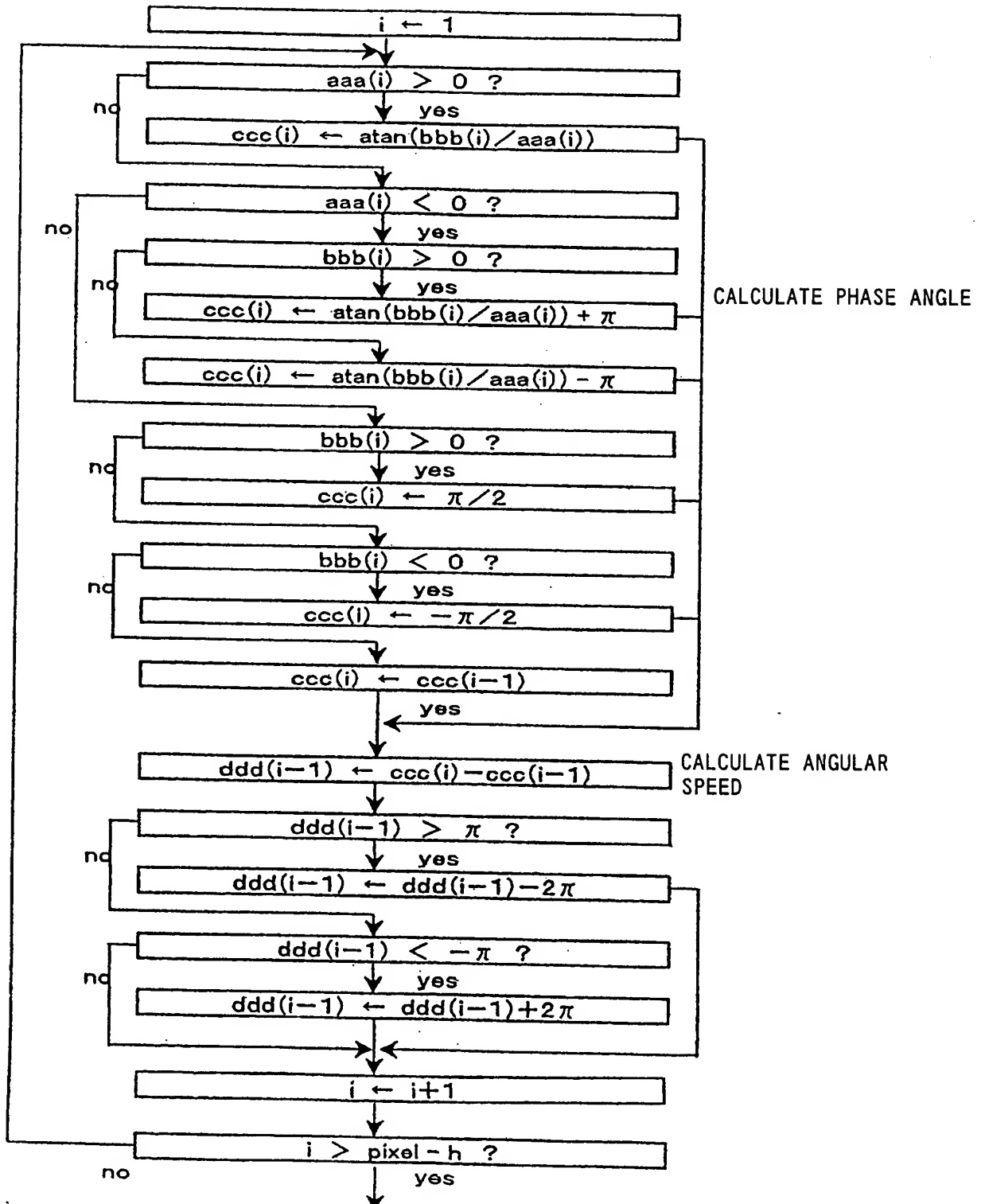


FIG. 19

STEP 3 CALCULATE PHASE ANGLE AND ANGULAR SPEED



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FIG. 20

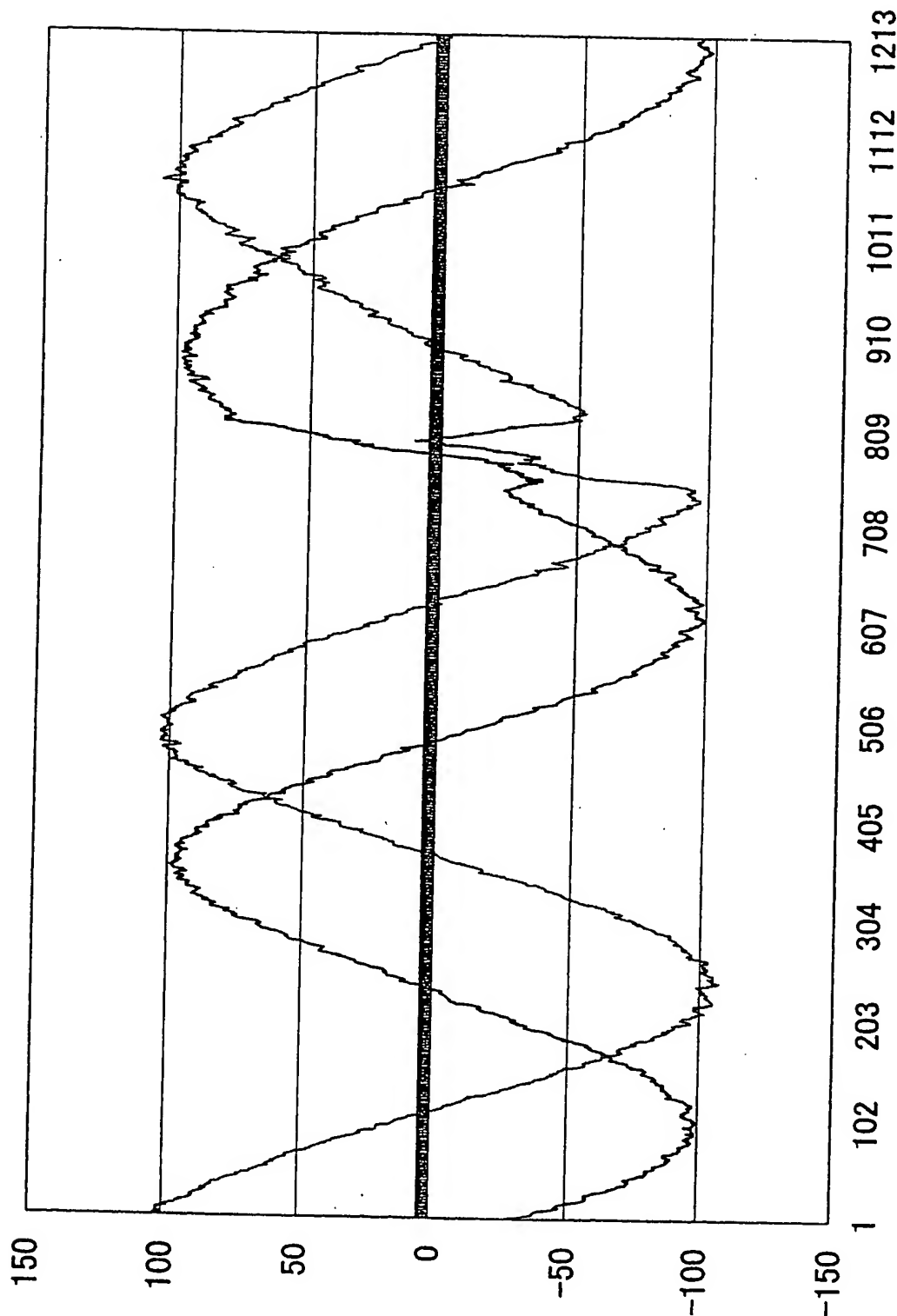


FIG. 21

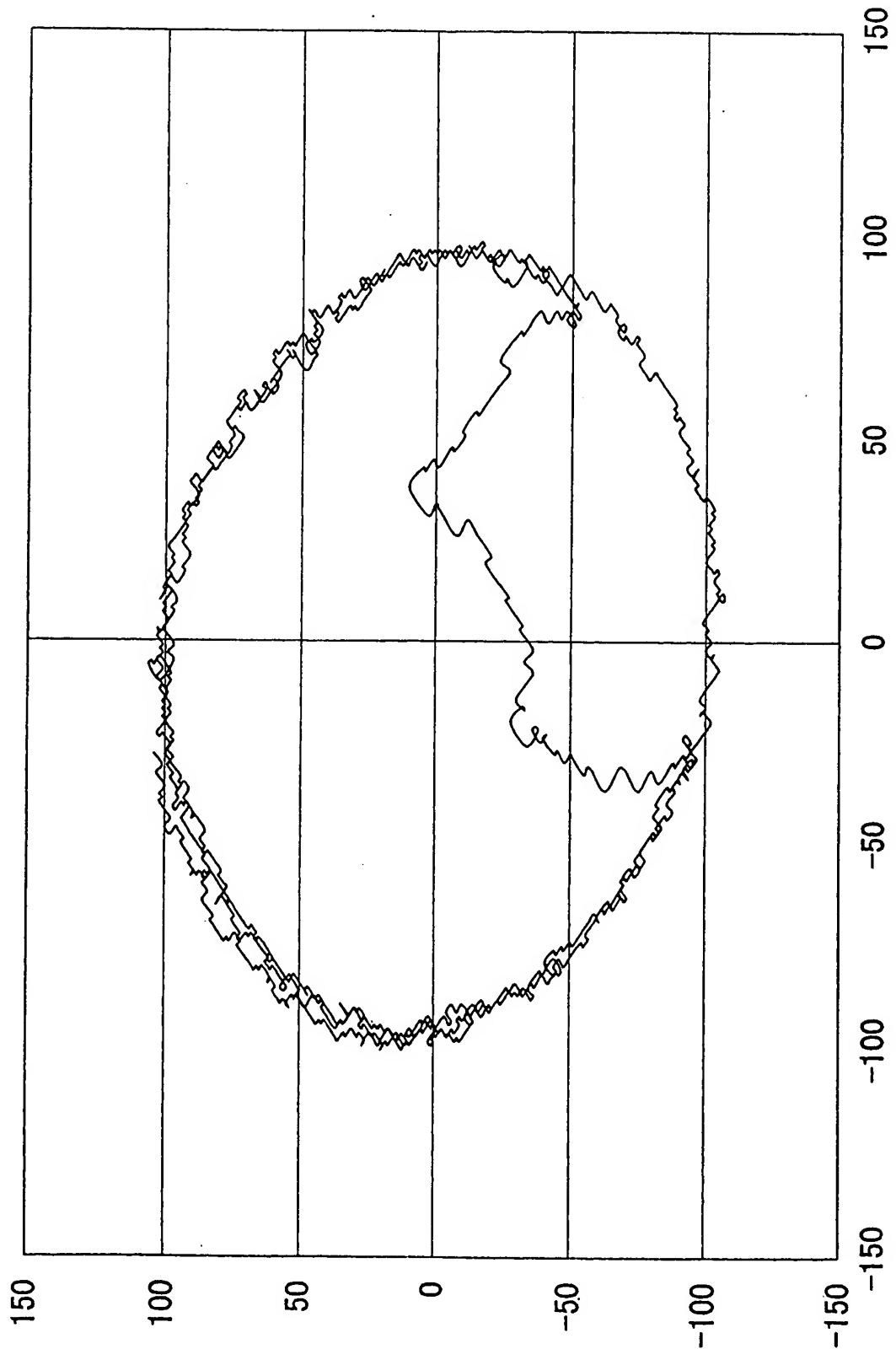
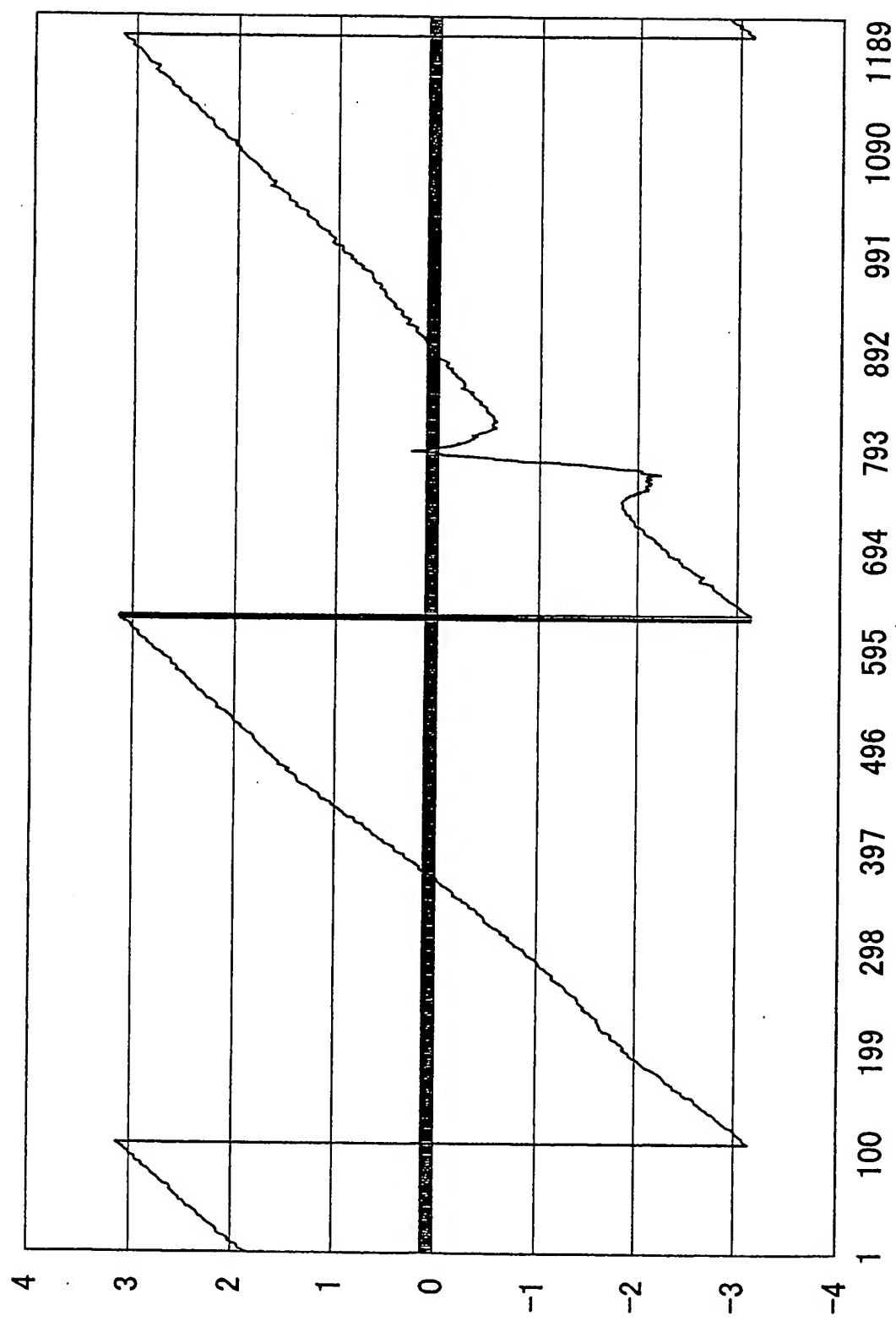


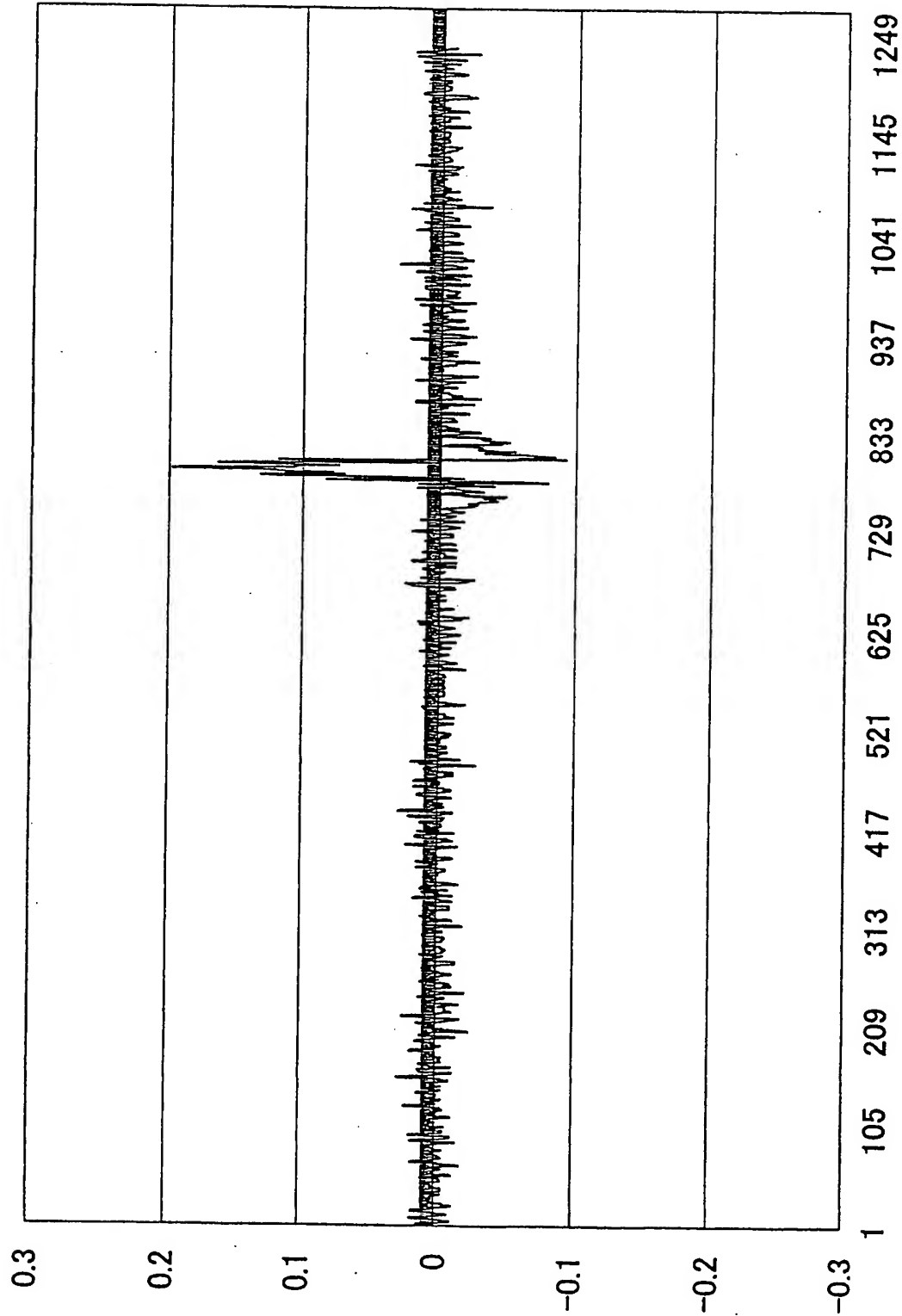
FIG. 22



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FIG. 23



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FIG. 24

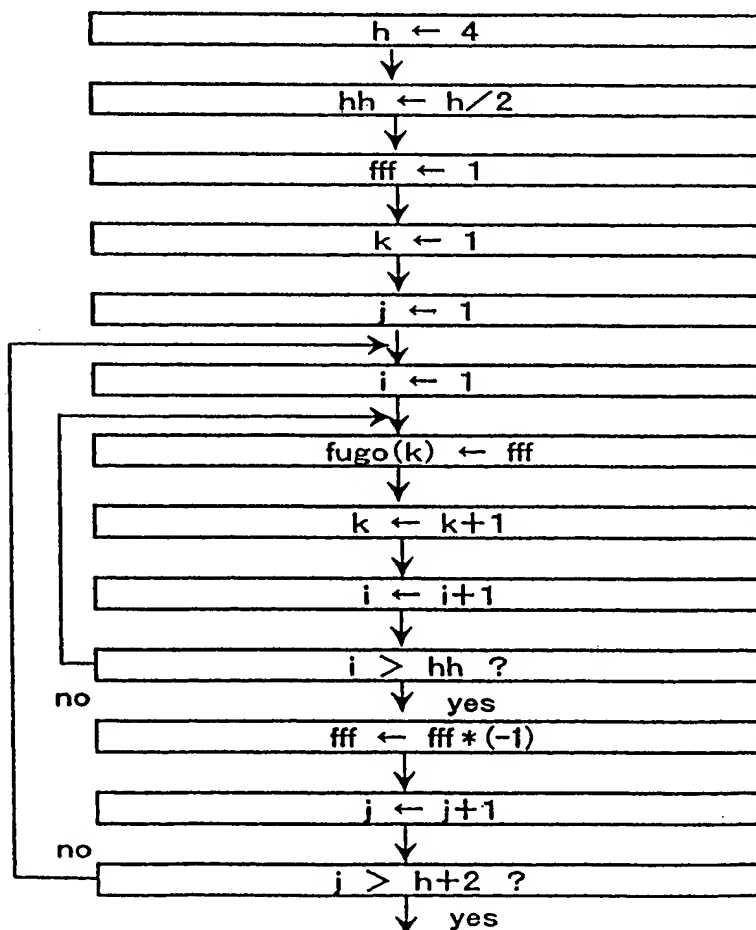
FLOWCHART OF SOFTWARE PROCESSING (PHASE A, PHASE B, PHASE C, PHASE D)

h : NUMBER OF PIXELS PER PITCH
 fugo : SIGN FOR CALCULATING ORIGINAL IMAGE DATA
 shift : AMOUNT OF SHIFT FOR CALCULATION FOR GENERATING
 SINE WAVES SHIFTED AT 90°
 data : ORIGINAL IMAGE DATA
 phase_a : DATA ON SINE WAVES WITH PHASE A
 phase_b : DATA ON SINE WAVES WITH PHASE B
 phase_c : DATA ON SINE WAVES WITH PHASE C
 phase_d : DATA ON SINE WAVES WITH PHASE D
 ccc : PHASE ANGLE ON FIGURE
 ddd : ANGULAR SPEED
 pixel : NUMBER OF PIXELS FOR PROCESSING

STEP 1

GENERATE SIGN

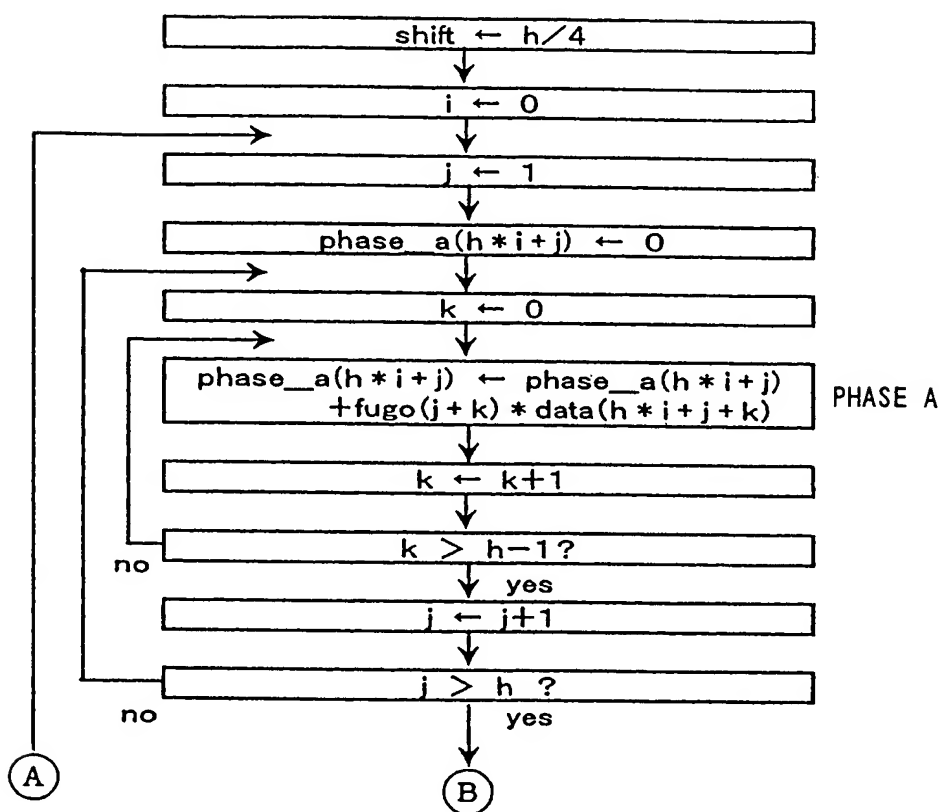
GENERATE ++ -- ++ -- ++ --



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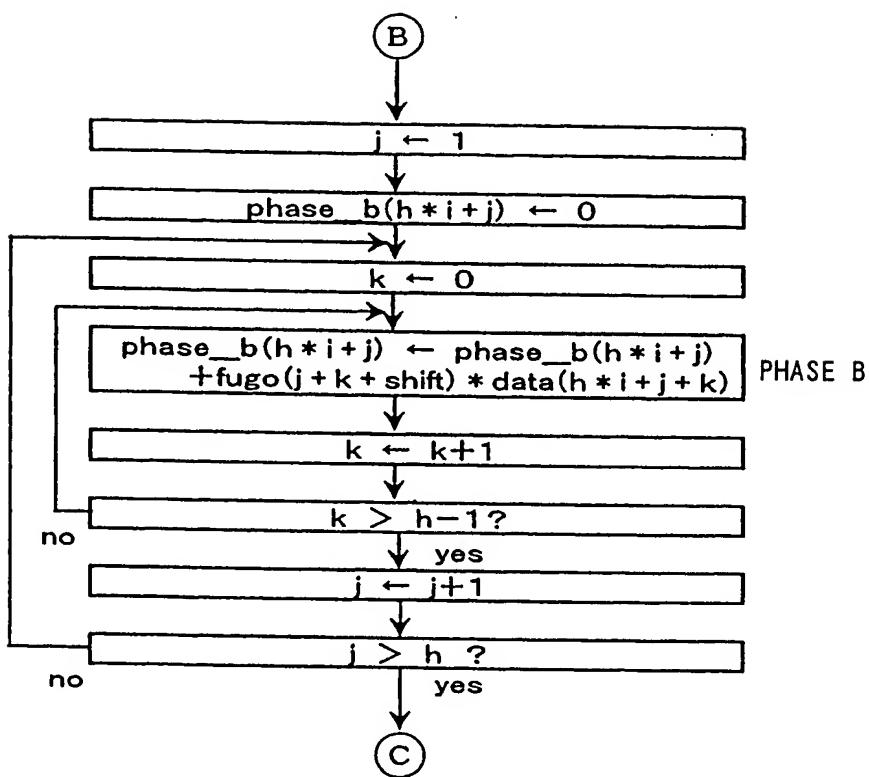
FIG. 25

STEP 2 GENERATE SINE WAVES WITH PHASE A, PHASE B, PHASE C, AND PHASE D



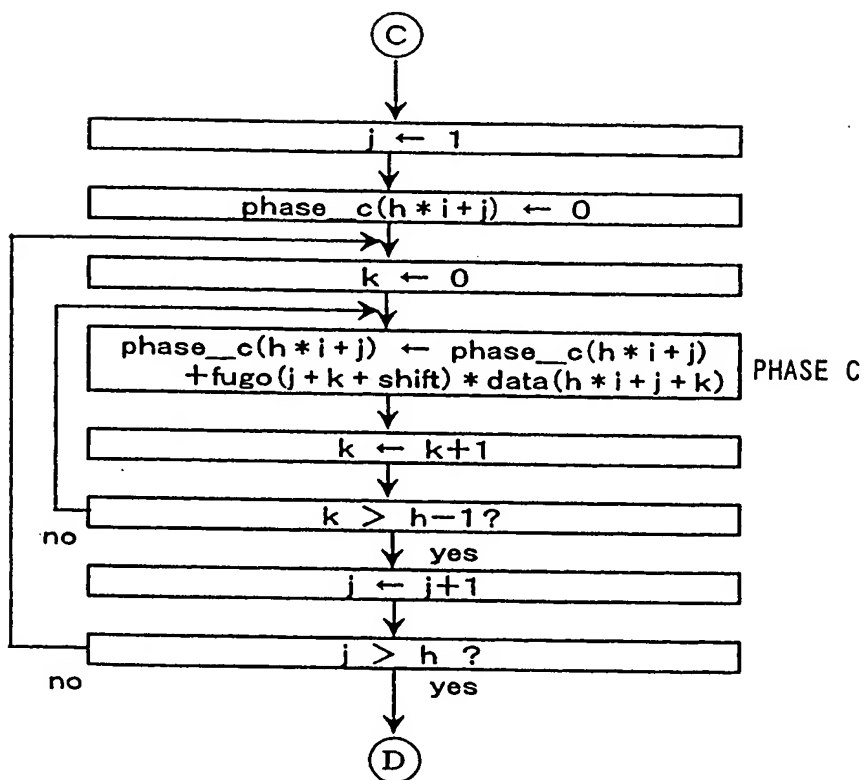
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FIG. 26



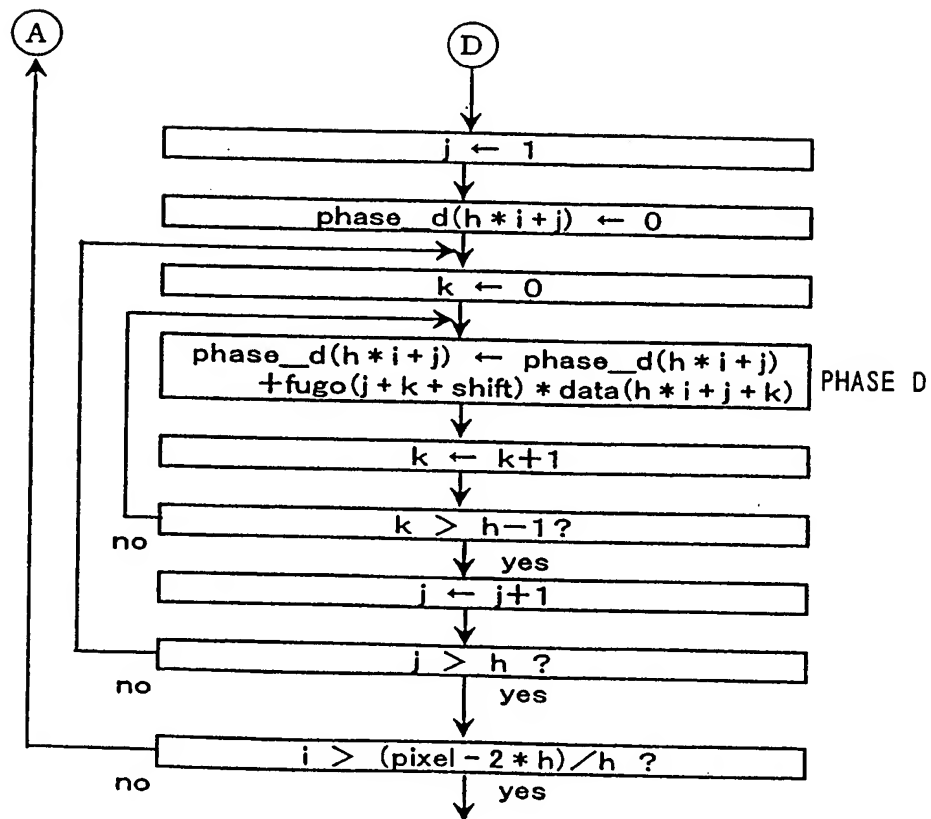
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FIG. 27



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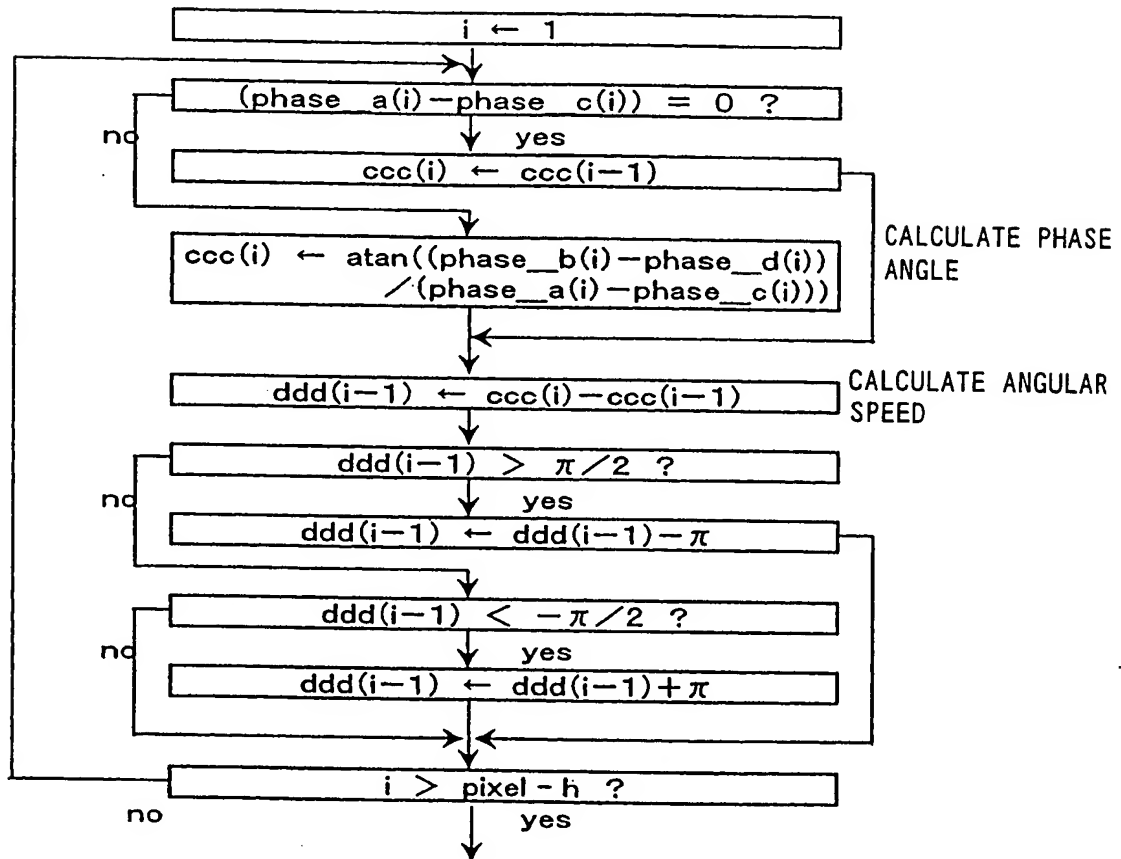
FIG. 28



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FIG. 29

STEP 3 CALCULATE PHASE ANGLE AND ANGULAR SPEED



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FIG. 30

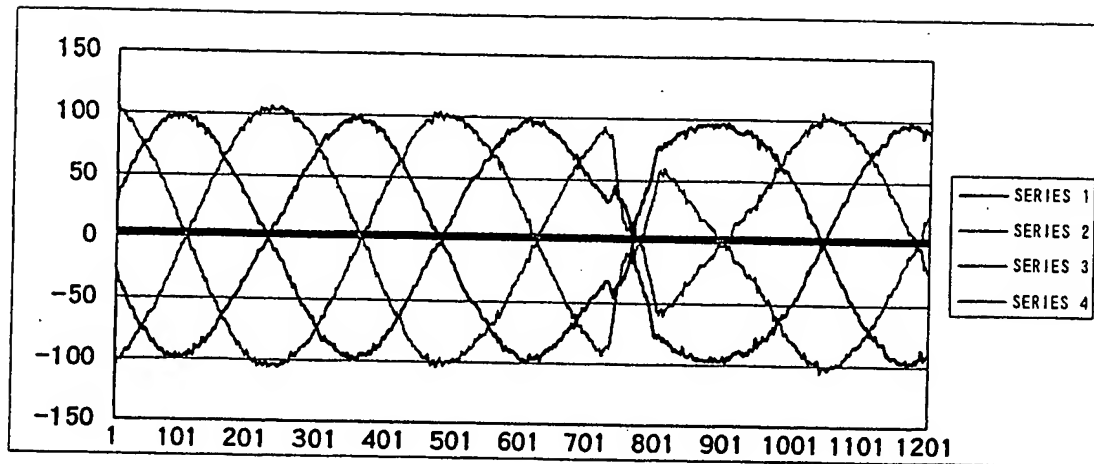
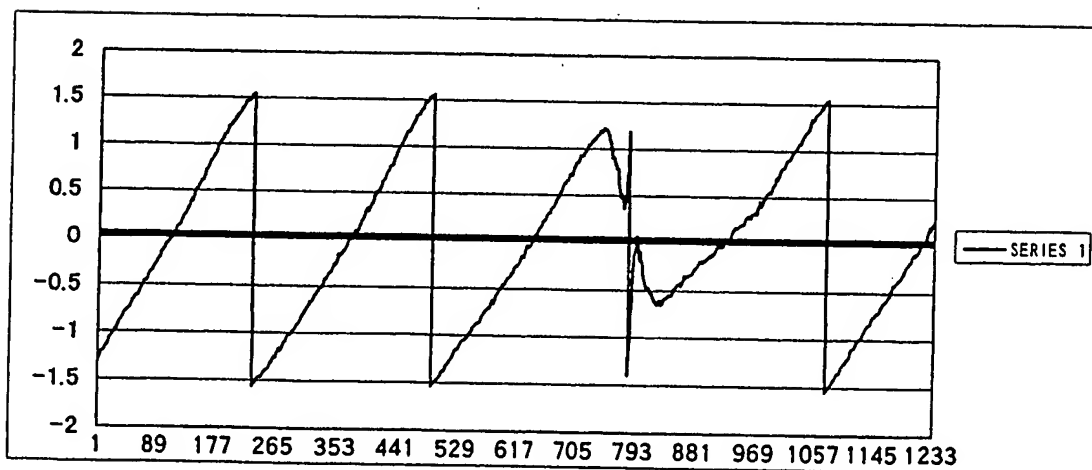


FIG. 31



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FIG. 32

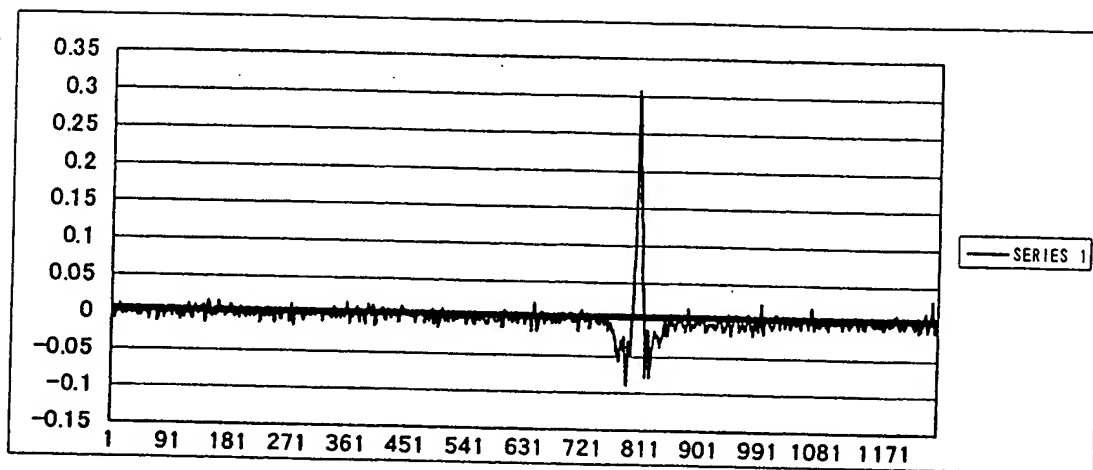
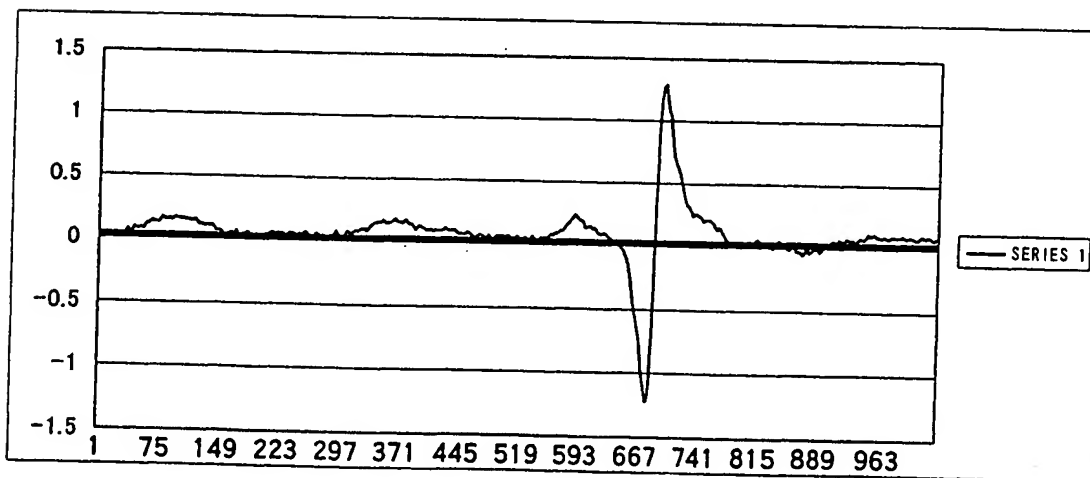


FIG. 33



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FIG. 34

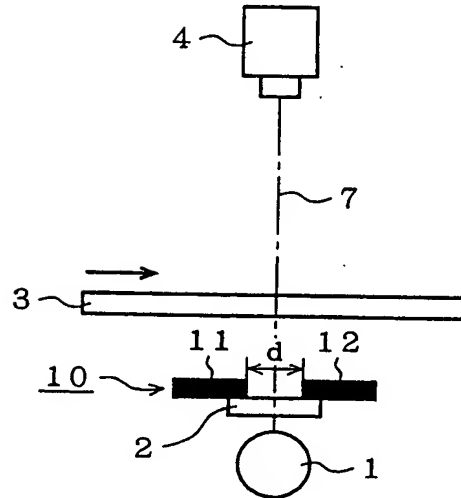
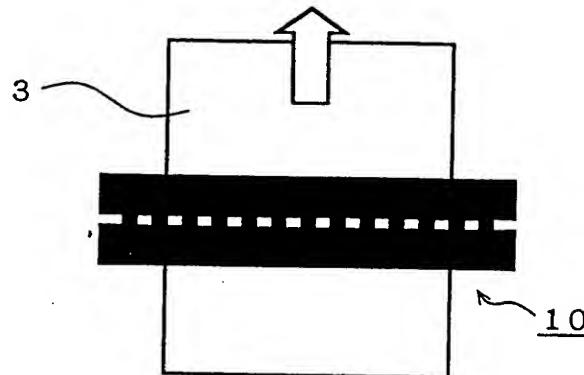


FIG. 35

CONVEYING DIRECTION OF GLASS



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FIG. 36

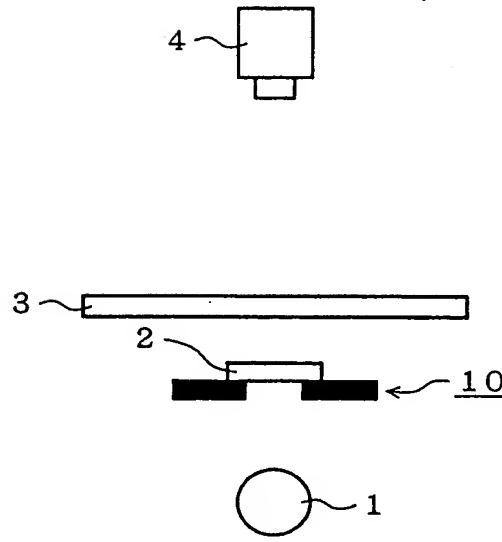


FIG. 37A

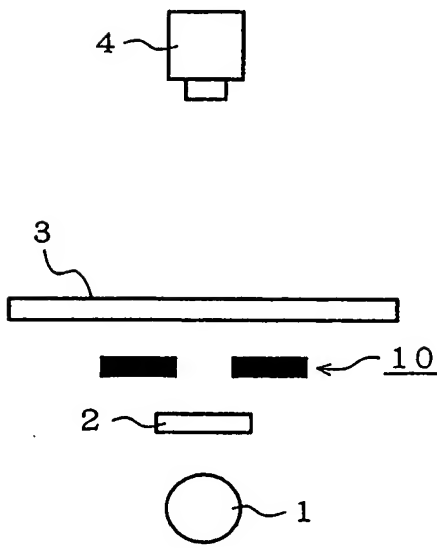
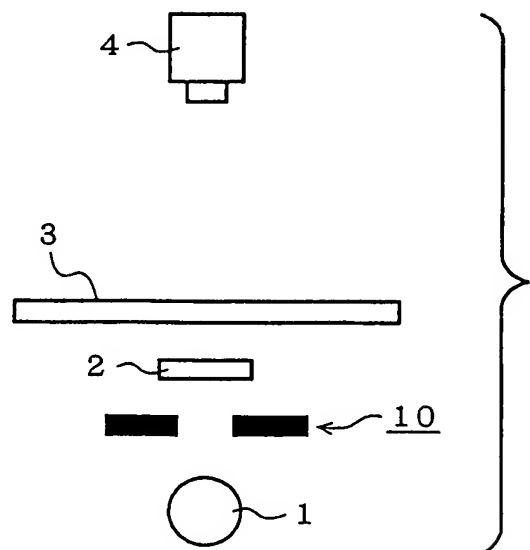


FIG. 37B



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FIG. 38

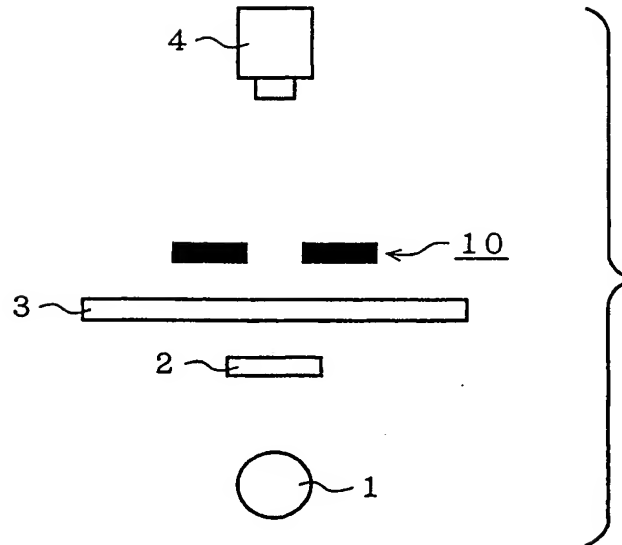
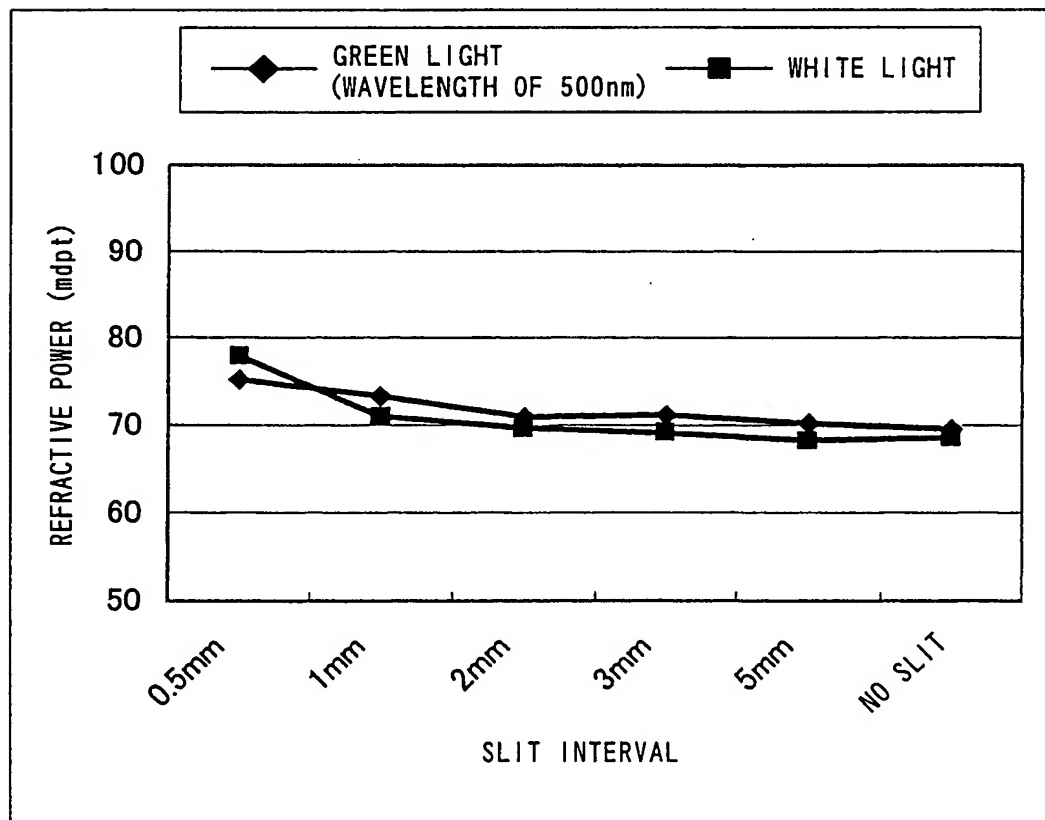


FIG. 39



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FIG. 40

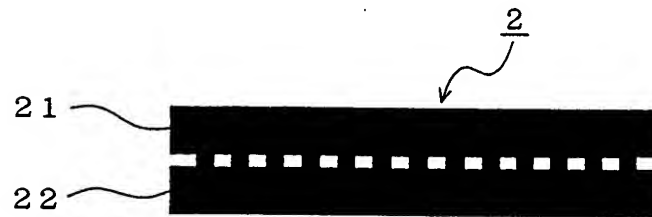
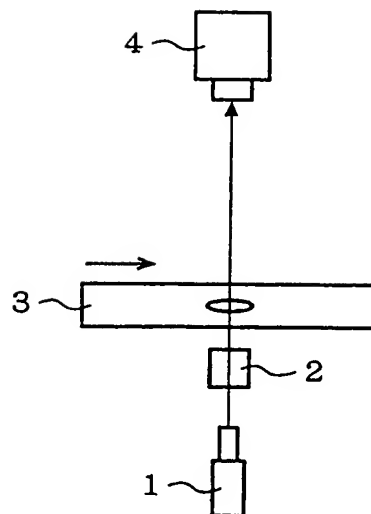


FIG. 41



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FIG. 42

